

U.S. Department of the Interior
U.S. Geological Survey

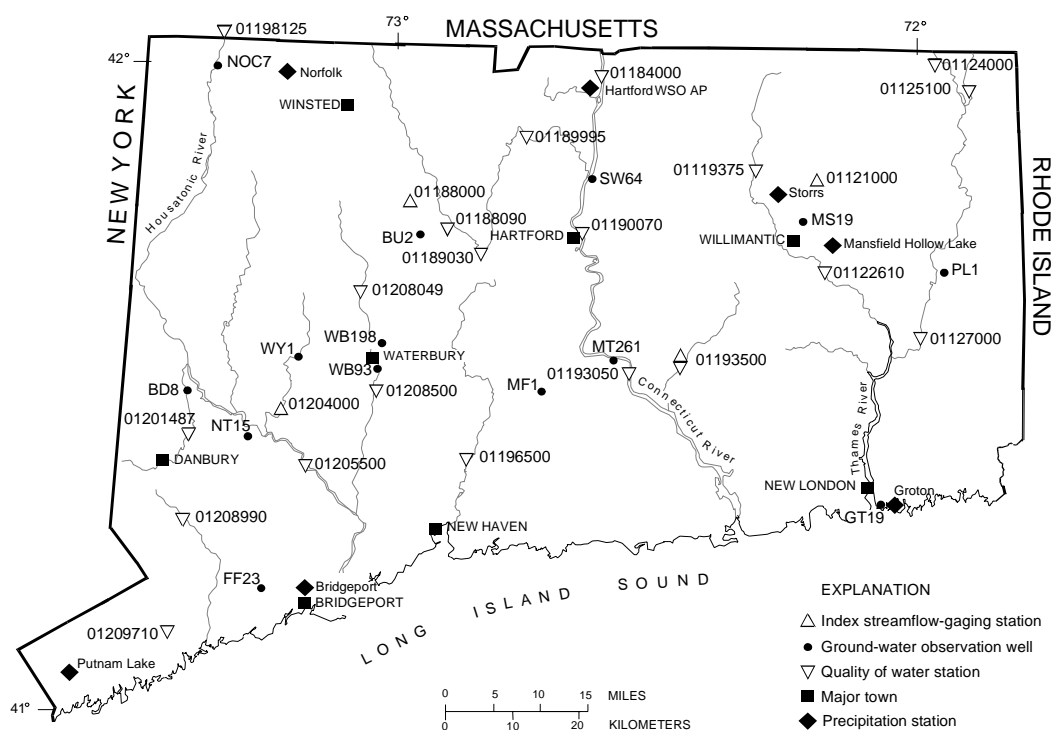


**WATER-RESOURCES CONDITIONS
IN CONNECTICUT, DECEMBER 1998**

The USGS provides maps, reports, and information to help others manage, develop, and protect America's water, energy, mineral, land, and biological resources.

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Also, there's a new fact sheet available on sediment loads. Ask for a free copy of **"Suspended-Sediment Loads and Yields in the Salmon and Coginchaug River Basins, Central Connecticut"** by Jonathan Morrison, FS-129-98. Call (860) 291-6740 or fax us at



DATA-COLLECTION SITES USED IN THIS REPORT

This report contains a small part of the ground-water, surface-water, and water-quality data collected by the USGS at sites in Connecticut. More complete information may be found in the Water-Data Report (compiled annually). This report was prepared by the USGS in cooperation with the Connecticut Dept. of Environmental Protection.

For more information on USGS programs in Connecticut, please contact Virginia de Lima (District Chief); 101 Pitkin St., East Hartford, CT 06108; **phone (860) 291-6740**; fax (860) 291-6799; dc_ct@usgs.gov

Additional earth science information, including this document, is on the USGS Home Page on the World Wide Web at <http://www.usgs.gov> or the Connecticut District home page at <http://conn.er.usgs.gov>. For more information on all USGS reports and products (including maps, images, and computerized data), call **1-888-ASK-USGS**.

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PRECIPITATION

Precipitation during December ranged from a low of **0.83 inches** at Hartford to a high of **1.91 inches** at Mansfield Hollow Lake. All stations reported monthly precipitation totals in the below-normal range for the month.

Precipitation totals for the year-to-date range from a low of **41.98 inches** at Bridgeport to a high of **58.35 inches** at Mansfield Hollow Lake. The yearly total at Putnam Lake was in the below-normal range; the total at Mansfield Hollow Lake was in the above-normal range; totals at all other stations were in the normal range for the year.

PRECIPITATION**(IN INCHES)****MEDIAN VALUES HAVE BEEN COMPUTED FOR 1961-90**

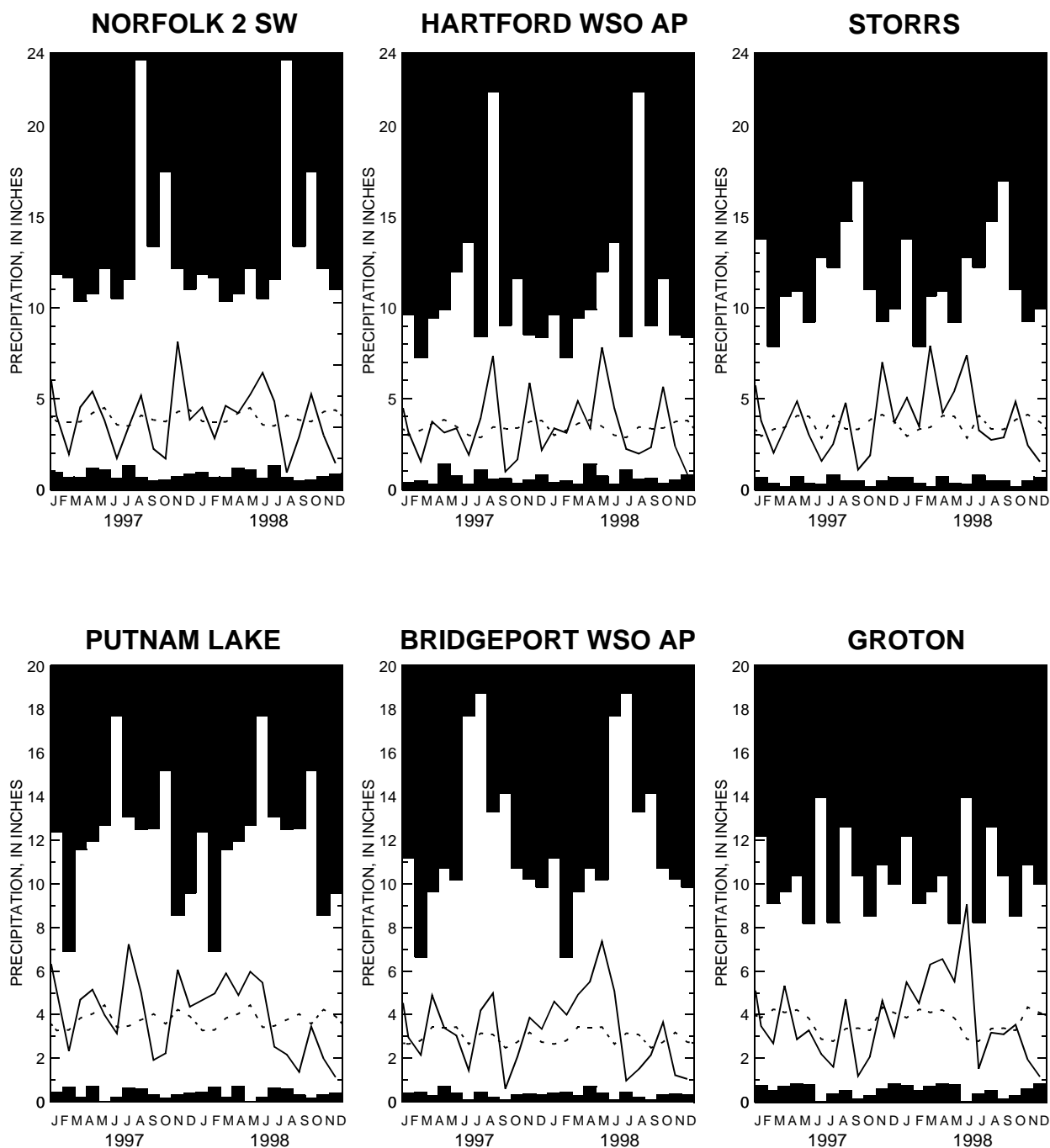
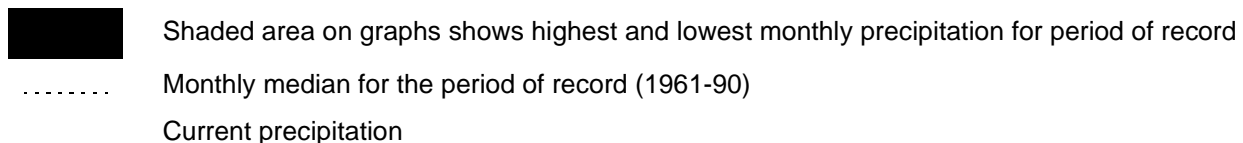
PRECIPITATION STATION	DECEMBER 1998 PRECIPITATION	DEPARTURE FROM MONTHLY MEDIAN	1998 CUMULATIVE PRECIPITATION	1998 DEPARTURE FROM CUMULATIVE MEDIAN
BRIDGEPORT WSO	1.05	-1.69	41.98	0.56
GROTON	1.17	-2.92	51.94	2.64
HARTFORD WSO AP	0.83	-2.97	42.38	-0.74
MANSFIELD HOLLOW LAKE	1.91	-1.37	58.35	12.78
NORFOLK	1.44	-2.95	46.25	-2.30
PUTNAM LAKE	1.13	-2.80	44.53	-4.70
STORRS	1.53	-2.20	51.16	3.32

(Monthly precipitation data collected by individual observers.)

PRECIPITATION—1998 YEARLY SUMMARY (* indicates new record)

PRECIPITATION STATION	J	F	M	A	M	J	J	A	S	O	N	D	1998
BRIDGEPORT WSO	4.61	4.00	4.89	5.50	7.36	5.08	0.97	1.49	2.16	3.65	1.22	1.05	41.98
GROTON	5.48	4.52	6.31	6.56	5.53	9.07	1.52	3.18	3.10	3.55	1.95	1.17	51.94
HARTFORD WSO AP	3.37	3.12	4.87	3.35	7.83	4.47	2.23	1.98	2.33	5.66	2.34	0.83	42.38
MANSFIELD HOLLOW LAKE	5.84	4.55	9.23	4.44	5.58	8.73	4.88	3.41	3.64	3.98	2.16	1.91	58.35
MOUNT CARMEL	5.60	5.70	6.64	5.28	Site discontinued from report								
NORFOLK	4.53	2.83	4.62	4.21	5.24	6.44	4.85	0.94	2.90	5.26	2.99	1.44	46.25
PUTNAM LAKE	4.67	4.98	5.90	4.90	5.98	5.47	2.53	2.17	1.37	3.46	1.97	1.13	44.53
STORRS	5.06	3.47	7.91	4.25	5.44	7.40	3.27	2.73	2.86	4.83	2.41	1.53	51.16

PRECIPITATION



Medians obtained from Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1961-90, Connecticut (National Oceanic and Atmospheric Administration, 1992).

Highest and lowest monthly precipitation levels of record obtained from Connecticut Geological and Natural History Bulletin 99 and National Oceanic and Atmospheric Administration (Climatological Data, New England).

GROUND-WATER LEVELS

Ground-water levels during December increased in about half the wells. All wells were either in the normal or below-normal range. A new minimum water level was recorded at WB-93 (Waterbury).

Ground-water levels are in feet below land surface. Statistics are based on period of record (through calendar year 1997).

WELL NUMBER AND TOWN	DEC. 1998 GROUND-WATER LEVEL (date measured)		NOV. 1998 GROUND- WATER LEVEL	DEC. 1997 GROUND- WATER LEVEL	DEC. MAXIMUM GROUND-WATER LEVEL (year recorded)		DEC. MINIMUM GROUND-WATER LEVEL (year recorded)		DEC. MEDIAN GROUND- WATER LEVEL
BD-8 (Brookfield)	32.19	12/23	32.17	31.25	26.96	1996	33.17	1980	30.82
BU-2 (Burlington)	30.77	12/23	32.73	24.53	16.10	1959	37.41	1948	23.90
FF-23 (Fairfield)	8.43	12/23	8.35	7.42	7.02	1986	8.50	1980	7.79
GT-19 (Groton)	16.94	12/27	16.68	15.45	11.52	1969	17.66	1965	14.96
MF-1 (Middlefield)	11.85	12/23	12.02	5.25	3.91	1973	15.00	1965	6.78
MS-19 (Mansfield)	13.11	12/24	13.35	13.60	9.33	1972/96	15.39	1965	12.02
MT-261 (Middletown)	22.72	12/23	22.98	20.86	18.43	1983	26.75	1956	19.95
NOC-7 (North Canaan)	9.61	12/28	9.70	9.30	5.40	1984	10.80	1964	9.40
NT-15 (Newtown)	6.02	12/23	7.30	4.67	0.98	1972	10.11	1980	4.64
PL-1 (Plainfield)	30.70	12/28	30.42	30.80	27.86	1996	33.14	1965	31.00
SW-64 (S. Windsor)	12.18	12/23	12.05	obstructed	8.10	1996	15.17	1965	11.58
WB-93 (Waterbury)	29.02	12/23	27.60	27.20	25.10	1974	29.02	1998	26.96
WB-198 (Waterbury)	20.15	12/23	19.21	17.09	9.82	1951	20.18	1949	15.13
WY-1 (Woodbury)	25.33	12/23	24.08	25.94	20.18	1996	29.33	1948	26.75




(Ground-water level data collected by USGS personnel and individual observers.)

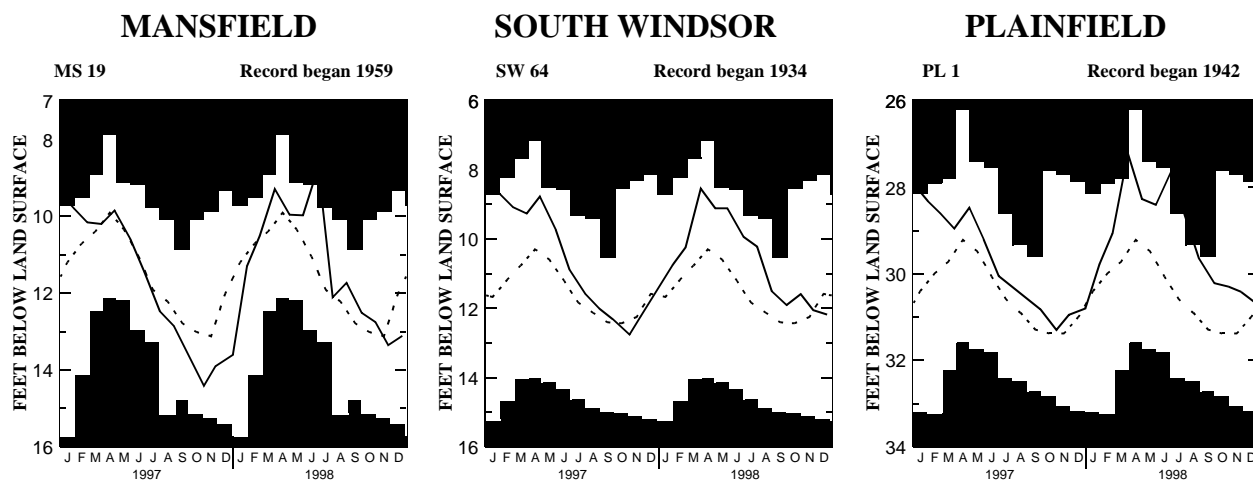
GROUND-WATER LEVELS—1998 YEARLY SUMMARY (* indicates new record)

WELL	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
BD-8 (Brookfield)	30.06	29.60	28.30	28.82	29.10	29.94	30.45	31.24	31.89	32.60	32.17	32.19
BU-2 (Burlington)	20.54	19.57	19.99	17.68	16.72	18.67	19.17	24.27	NA	32.69	32.73	30.77
FF-23 (Fairfield)	7.24	7.45	7.59	8.81	8.40	8.05	8.41	8.49	8.52	8.34	8.35	8.43
GT-19 (Groton)	13.42	13.20	12.50	13.26	14.35	14.19	15.72	16.42	16.67	16.52	16.68	16.94
MF-1 (Middlefield)	3.66	3.47	5.19	5.40	6.73	7.48	9.72	10.91	11.51	11.83	12.02	11.85
MS-19 (Mansfield)	11.30	10.51	9.29	9.96	9.98	8.72	12.11	11.74	12.51	12.75	13.35	13.11
MT-261 (Middletown)	19.24	18.78	18.23	18.79	18.98	19.86	20.33	20.53	23.02	21.93	22.98	22.72
NOC-7 (North Canaan)	9.18	9.16	9.08	9.35	9.63	9.55	9.76	10.35	10.68	9.58	9.70	9.61
NT-15 (Newtown)	3.13	2.65	2.53	3.40	3.15	4.19	6.00	6.92	8.40	6.22	7.30	6.02
PL-1 (Plainfield)	29.78	29.06	27.77	28.27	28.40	27.61	28.65	29.65	30.22	30.30	30.42	30.70
SW-64 (S. Windsor)	10.75	10.23	8.54	9.10	9.10	9.92	10.21	11.50	11.91	11.59	12.05	12.18
WB-93 (Waterbury)	26.91	26.05	25.95	26.85	26.30	27.35	28.02	28.05	27.80	27.90	27.60	29.02*
WB-198 (Waterbury)	14.45	13.13	11.50	12.75	12.31	14.02	14.55	16.74	18.78	18.85	19.21	20.15
WY-1 (Woodbury)	22.68	21.95	20.67	21.32	21.27	22.24	22.77	24.94	27.25	24.24	24.08	25.33

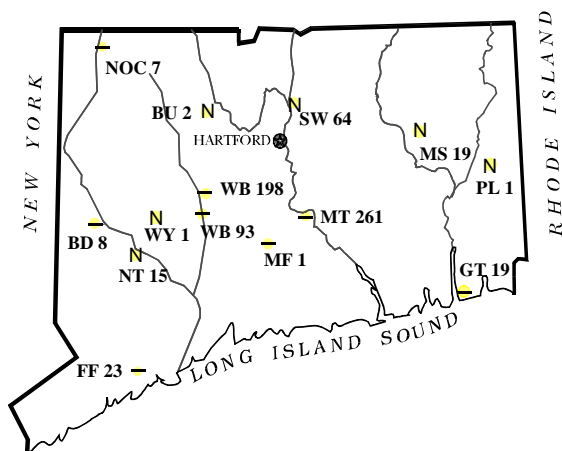
GROUND-WATER LEVELS (CONTINUED)

(Status of ground-water storage as indicated by the water level changes in observation wells, as shown on hydrographs)

-  Shaded area on graphs show highest and lowest water levels of record.
-  Solid line shows current water levels.
-  Dashed line is monthly median for period of record through calendar year 1996.



MASSACHUSETTS



ABOVE NORMAL

Within the highest 25% of record for this month.



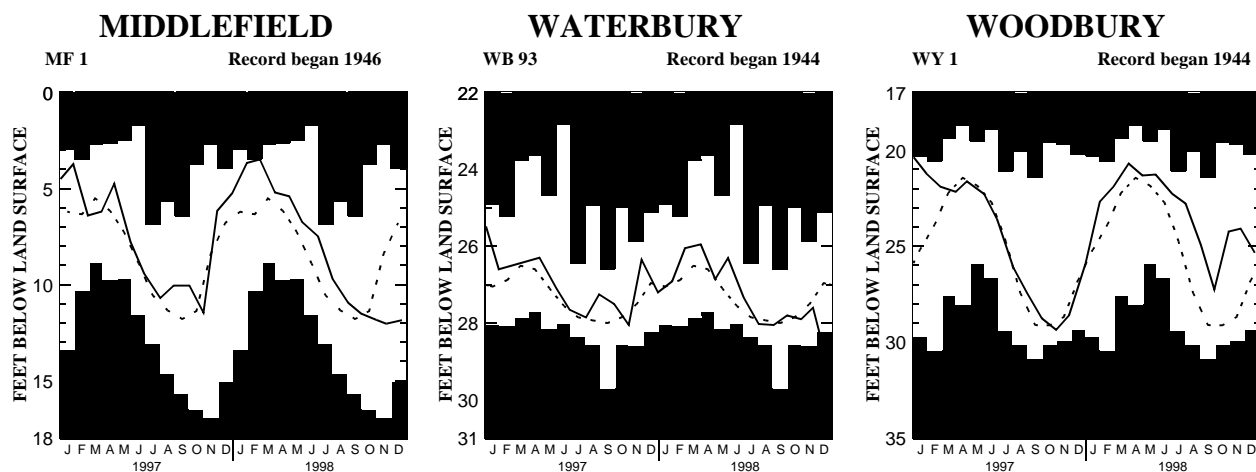
NORMAL RANGE

Between the highest and lowest 25% of record for this month.



BELOW NORMAL

Within the lowest 25% of record for this month.



STREAMFLOW (measured in cubic feet per second)

→ PROVISIONAL DATA ←

In general, streamflows in December were in the below-normal range. Mount Hope River (northeastern Connecticut) fell to the below-normal range after being in the normal range for 1 month. Burlington Brook (northwestern Connecticut) remained in the below-normal range for the 2nd consecutive month. Salmon River (southeastern Connecticut) remained in the below-normal range for the 2nd consecutive month. Pomperaug River (southwestern Connecticut) fell to the below-normal range after being in the normal range for 1 month. Across the State, mean streamflow for December averaged 43 percent of the December long-term median value.

USGS STREAMFLOW-GAGING STATION NAME AND NUMBER	DEC. 1998 MEAN	NOV. 1998 MEAN	DEC. 1997 MEAN	DECEMBER MAXIMUM VALUE (year recorded)		DECEMBER MINIMUM VALUE (year recorded)		DEC. MEDIAN (1961-90)
MT HOPE RIVER (01121000)	19.4	21.4	26.4	201	1996	14.4	1944	39.3
BURLINGTON (01188000)	2.97	3.73	6.85	27.1	1974	2.13	1932	7.29
SALMON RIVER (01193500)	54.0	63.2	119	641	1973	41.5	1944	169
POMPERAUG (01204000)	59.1	76.8	109	418	1996	22.1	1936	117

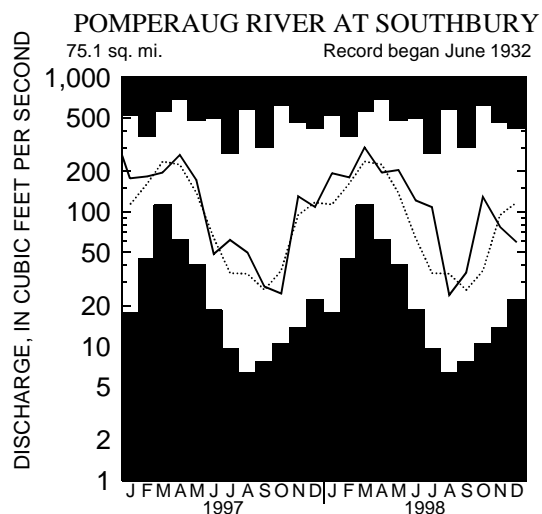
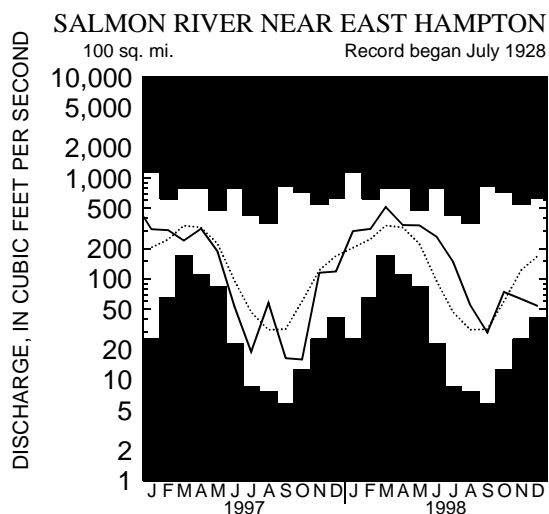
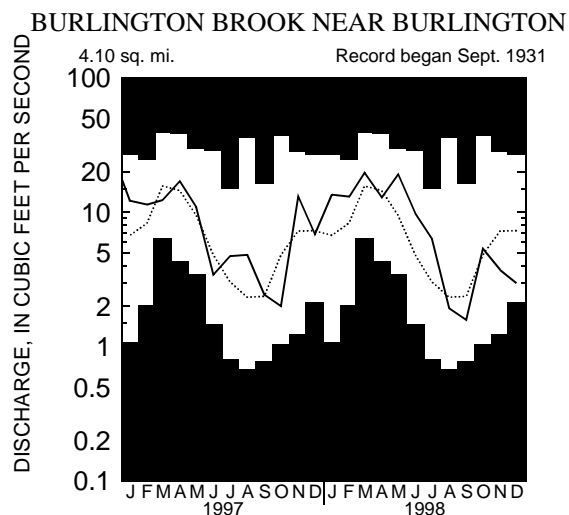
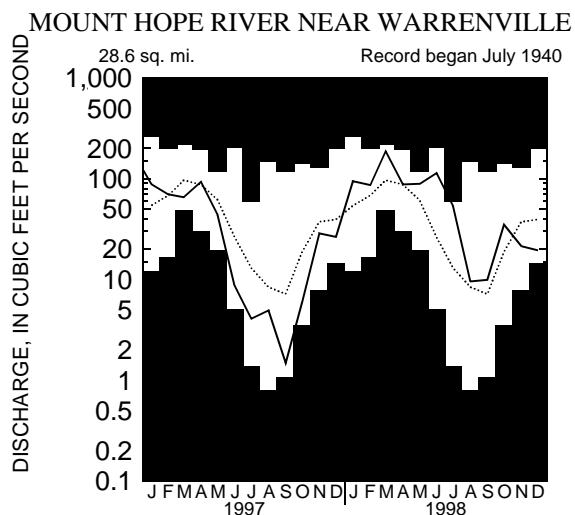
STREAMFLOW (MEAN/MEDIAN)—1998 YEARLY SUMMARY (* indicates new record)

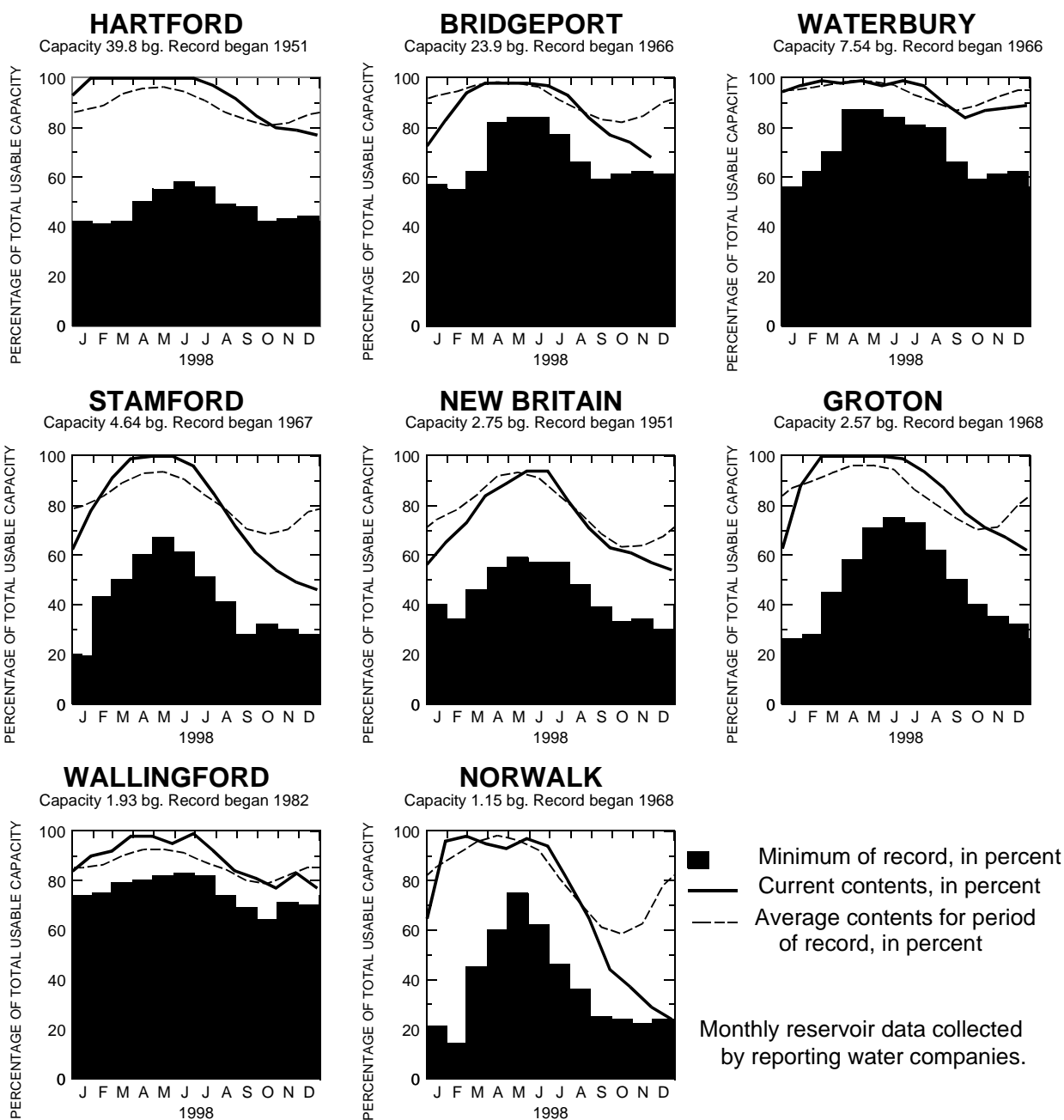
USGS STATION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MT HOPE RIVER	94.2/54.1	86.5/68.1	187/96.5	87.7/87.2	88.7/61.6	114/26.2	53.2/13.0	9.55/8.41	9.91/7.17	34.8/18.8	21.4/37.3	19.4/39.3
BURLINGTON	13.5/6.73	13.1/8.31	19.7/15.7	12.9/14.5	19.2/9.45	9.80/4.79	6.34/3.03	1.93/2.33	1.58/2.37	5.34/4.82	3.73/7.24	2.97/7.29
SALMON RIVER	298/204	313/247	519/338	342/324	341/224	263/95.6	148/46.8	54.5/31.3	29.4/31.8	74.4/60.1	63.2/122	54.0/169
POMPERAUG	193/113	180/161	301/236	195/224	204/138	121/64.2	108/34.9	24.1/34.5	35.2/26.2	129/36.3	76.8/94.4	59.1/117

Shaded areas on graphs show highest and lowest monthly mean discharge of record.

— Current record

..... Median (1961-1990)

MONTHLY MEAN RUNOFF AT FOUR INDEX STATIONS

RESERVOIRS (Contents in billion gallons)

RESERVOIR SYSTEM (usable capacity, in billion gallons)	NOV. CAPACITY (PERCENT)	DEC. CAPACITY (PERCENT)	LONG-TERM AVERAGE CAPACITY FOR DECEMBER(PERCENT)
Hartford (39.8 bg)	79	77	85
Bridgeport (23.9 bg)	68		90
Waterbury (7.54bg)	88	89	95
Stamford (4.64 bg)	49	46	78
New Britain (2.75 bg)	57	54	67
Groton (2.57 bg)	67	62	80
Wallingford (1.93 bg)	83	77	85
Norwalk (1.15 bg)	29	24	78

**U.S. Department of the Interior
U.S. Geological Survey
Water Resources Division
101 Pitkin St.
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CHEMICAL, PHYSICAL, AND BACTERIOLOGICAL QUALITY OF SELECTED STREAMS IN CONNECTICUT

[Station locations shown on front page; --, not applicable; **streamflow** measured in instantaneous cubic feet per second; **% flow duration** is that flow that was equaled or exceeded more than "X" percent of the time from 1961-90; **bacteriological analysis** reconnaissance data enumerated using membrane filter method with immediate incubation; **col/100 mL**, colonies per 100 milliliters; **K**, results based on colony count outside the acceptable range (non-ideal colony count)]

USGS WATER-QUALITY STATION NAME AND NUMBER	SAMPLE DATE IN 1998	STREAMFLOW/ % FLOW DURATION	SPECIFIC CONDUCTANCE (in $\mu\text{S}/\text{cm}$ at 25°C)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN CONCENTRATION (mg/L) %SATURATION	FIELD PH	FECAL COLIFORM (COL/100 mL)	ENTEROCOCCI (COL/100 mL)
01119375 Willimantic R. at Merrow			SITE NOT SAMPLED THIS MONTH					
01122610 Shetucket R. at South Windham	12/22	277/--	109	5.5	12.5/101	7.26	160	15K
01124000 Quinebaug R. at Quinebaug			SITE NOT SAMPLED THIS MONTH					
01125100 French R. at North Grosvenordale			SITE NOT SAMPLED THIS MONTH					
01127000 Quinebaug R. at Jewett City			SITE NOT SAMPLED THIS MONTH					
01184000 Connecticut R. at Thompsonville	12/16	11600/50	111	5.5	11.8/93	7.55	396	48
01188090 Farmington R. at Unionville			SITE NOT SAMPLED THIS MONTH					
01189030 Pequabuck R. at Farmington	12/15	35.7/--	303	4.0	10.8/80	7.36	46400K	6500K
01189995 Farmington R. at Tariffville	12/15	395/90	144	2.5	13.3/98	7.34	960	120K
01190070 Connecticut R. at Hartford	12/11	--/--	123	6.0	12.1/96	7.58	180	9K
01193050 Connecticut R. at Middle Haddam	12/11	--/--	125	6.5	12.0/97	7.87	740	58
01193500 Salmon R. near East Hampton			SITE NOT SAMPLED THIS MONTH					
01196500 Quinnipiac R. at Wallingford	12/7	75.9/80	377	11.0	11.5/106	7.87	520	50
01198125 Housatonic R. near Ashley Falls, MA			SITE NOT SAMPLED THIS MONTH					
01201487 Still R. at Rt. 7 at Brookfield Center			SITE NOT SAMPLED THIS MONTH					
01205500 Housatonic R. at Stevenson			SITE NOT SAMPLED THIS MONTH					
01208049 Naugatuck R. near Waterville			SITE NOT SAMPLED THIS MONTH					
01208500 Naugatuck R. at Beacon Falls			SITE NOT SAMPLED THIS MONTH					
01208990 Saugatuck R. near Redding			SITE NOT SAMPLED THIS MONTH					
01209710 Norwalk R. near Winnipauk	12/9	10.7/--	339	8.0	13.3/112	8.51	44	29

↓
PROVISIONAL DATA
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